be held (for example in packs of 10, 20 and the like) for convenient usage when required.

[0065] Tray **1** packages can incorporate sets of separate self-adhesive labels or devices holding the codes and for mounting on the tray **1**, on syringes S and vials V or ampoules A for matching purposes. The sets of codings may be arranged for either substantially "standard" use codes or alternatively, for special or specific codes to be provided in special use arrangements.

[0066] In one alternative form of the invention coded labels arranged for the syringes S are provided in a substantially inverted L shaped configuration, to enable positioning along the syringe body and provision of a readily verifiable code together with a bar code (or interactive indicator for a sensor/monitoring apparatus arrangement) yet still leaving a visual "window" for use of syringe volume graduations thereon.

[0067] In further alternative embodiments of the invention, it is envisaged that the additional monitoring checking and notification systems of the apparatus also provide the ability for users to enter further information including, for example specific patient drug allergies and furthermore, to hold on the database or library standard codes and pharmaceutical details for drugs. This facility enables enhancement of the monitoring and in particular, the warning facility described in relation to the preferred embodiment, whereby should a user attempt to give a drug to which a patient is allergic or at variance with predetermined protocols, a timely warning can be given.

[0068] In a further embodiment of the invention, the apparatus can verify and record not only drug identity and strength, but also measure the amount of drug actually administered giving the user additional information during the procedure, and also providing a verifiable record subsequently. Furthermore, the code may additionally provide a basis for drug batch identification and to provide raw data and actuation for inventory information, control and drug reordering.

[0069] In one embodiment of the invention the monitoring apparatus may be integrated, preferably via a microprocessor to additionally provide an integrated help facility for pharmaceutical information such as dosages, drug properties and the like. One such use would be for the database or library of information on commonly used drugs to be accessible by the user who brings a coded syringe S or other coded drug carrier into proximity with the reader or scanner of the monitoring apparatus and, for example operates a specified key or actuation device to access pharmaceutical information on the drug and its properties during the course of the procedure.

[0070] Whilst the invention has been described with reference to a tray **1** and to prefilled syringes S, the invention is not limited to such arrangements and it is envisaged that other drug administration apparatus can be provided and utilised in conjunction with the methods and apparatus described.

[0071] Thus, by this invention there is provided a method and apparatus for administration of substances which substantially reduces the risk of errors and provides significant convenience and security.

1. A method of monitoring administration of a therapeutic or anesthetic substance used during a medical or surgical procedure, including the steps of establishing first and second predetermined coded substance sites for predetermined coded substance carrier, wherein the code for the sites and the code for the carrier are independent of each other and the code corresponds to the substance, and wherein the identity of the coded sites once established are fixed for a predetermined period of time of the procedure;

placing the coded carrier in an at least partially loaded condition prior to use of the substance in the first coded site,

placing the coded carrier in the second coded site after use and in an at least partially discharged condition relative to the at least partially loaded condition, and

maintaining the coded carrier in the second coded site for the predetermined period of time of the procedure.

2. A method of monitoring administration of a therapeutic or anesthetic substance during a medical or surgical procedure including the steps of

forming a support device having first and second predetermined coded substance sites for a predetermined coded loaded substance carrier, wherein the code for the site and the code for the carrier are independent of each other and corresponds to the substance, and wherein the identity of the coded sites once established are fixed for a predetermined period of time of the procedure,

taking the carrier from the first predetermined coded site for use and,

after use, positioning the carrier in the second predetermined coded site.

3. A method as claimed in claim 1 including the steps of coding at least portions of said first coded site and second coded site, together with at least a portion of said carrier and verifying use of the substance in said carrier via a predetermined code relationship between said first coded site, said second coded site and said carrier as said carrier is introduced to and removed from said sites.

4. A method as claimed in claim 1 including the step of recording the verification of the carrier at least during a use phase of said carrier.

5. A method as claimed in claim 1 including the step of monitoring movement of said carrier to and from either one or both of predetermined first and second sites.

6. A method as claimed in claim 5 including the step of monitoring said movement via a verification means adapted to detect an encodation of the carrier when said carrier is brought into a predetermined proximity of the verification means.

7. A method as claimed in claim 6 including the step of providing an audible and/or visual signal which is actuated as said carrier is brought into a predetermined proximity with said verification means.

8. A method as claimed in claim 1 including the step of comparing a result of verification of said carrier against predetermined data and including the step of providing a warning when a verification out of range of the predetermined data is detected.